

Remarks

Favorable reconsideration of this application is requested in view of the above amendments and following remarks. Claim 19 is supported, for example, by Examples 5 and 9.

Claims 3, 4, 15, 16 and 17 have been rejected under 35 U.S.C. § 102(b) as being anticipated by JP 5-220403 A. Claims 2-5, 10 and 15-17 have been rejected as unpatentable over this reference. These rejections are respectfully traversed.

JP 5-220403 is directed to a zeolite catalyst. The reference teaches that a number of different metals could be carried by the catalyst if desired. The sole metal used in the examples in the reference is copper.

The present claims are directed to cobalt-containing catalysts with certain dimensional characteristics, and methods of use thereof in NO_x reduction. The present invention provides catalysts that show durable performance even in the presence of water vapor. As shown in Example 11 (and corresponding Figure 1) of the present specification, Co-BEA exhibits a NO_x conversion rate of 60% after 2,000 hours whereas Co-MFI exhibits a substantial activity reduction after about 100 hours and a 30% conversion rate after only 400 hours. Note further that Comparative Example 9 (and related Figure 3) show that Cu-BEA did not exhibit the desirable performance properties of Co-BEA. This is further evidenced by the results for Ni- and Cu- containing catalysts reported in the Declaration of Mr. Tabata filed with the previous Amendment.

The prior art must be considered for all that it teaches and fairly suggests. In re Burckel, 201 USPQ 67 (CCPA 1979), cited in In re Baird, 29 USPQ2d 1550 (Fed. Cir. 1994). In the present case, the teachings of the reference as a whole inevitably would lead one of ordinary skill to a conclusion that the metals to be used with the zeolite are essentially interchangeable, with copper providing the more desirable results. In contrast, the present invention requires a particular metal, and provides a catalyst with properties superior even to the product specifically recommended by the reference. Even if the reference disclosure can be considered generic to the present invention, this alone does not constitute anticipation in the absence of some teaching leading one of ordinary skill to the species or subgenus claimed. In re Kalm, 154 USPQ 10 (CCPA 1967). In the present case, nothing in the 5-220403 reference leads one to the specific combination presently claimed; as noted above, if anything the reference leads one to copper as the metal to be used with the catalyst. Therefore, there is no anticipation of the present

invention. With respect to claim 19, as noted in the rejection the reference is directed to C₃H₆ as the hydrocarbon, and therefore claim 19 is further removed from the reference.

Even assuming, arguendo, that the reference establishes a case of prima facie obviousness, nothing in the reference provides any reason to expect that the selection of cobalt for the catalyst would provide the improvement in properties demonstrated by the evidence of record. Therefore, any prima facie case of obviousness has been overcome.

Claims 3, 15 and 16 have been rejected under 35 U.S.C. § 102(b) as being anticipated by or obvious over Tamura et al., GB 2 238 784 A. These rejections are respectfully traversed.

The present claims require a structure having a plurality of straight channels of oxygen 10-ring size or larger in section. This plurality of straight channels further is required to be oriented in two different dimensional directions.

In contrast, Tamura et al. disclose NO_x reduction using a ferrierite catalyst. Applicants respectfully contend that even if this material includes straight channels oriented in two different dimensional directions, the sizes of the straight channels are 8-ring and 10-ring. Thus, the present claims are not anticipated.

As with the previous rejection, nothing in Tamura et al. suggests any reason to expect the cobalt-carrying catalysts of the present invention to show the improved properties demonstrated by the experimental work of record. Therefore, even if Tamura et al. is sufficient to establish prima facie obviousness, the prima facie obviousness has been overcome.

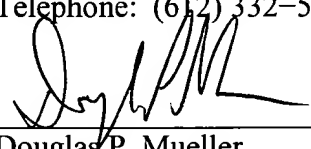
In view of the above, favorable reconsideration in the form of a Notice of Allowance is requested.

Respectfully submitted,

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April 27, 1999

Date



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